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PTO/SB/21 (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/787,194
	Filing Date	March 15, 2001
	First Named Inventor	Hitoshi Endou
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission	Attorney Docket Number	55620(305032)

**ENCLOSURES (Check all that apply)**

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): Request for Reconsideration Copy of Submission of Sequence Listing as filed on 10/23/01 (with copy of originally filed Computer Readable Form)
<b>Remarks</b>		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	EDWARDS ANGELL PALMER & DODGE LLP		
Signature	<i>Christine C. O'Day</i>		
Printed name	Christine C. O'Day		
Date	January 13, 2009	Reg. No.	38,256

Attorney Docket No.: 55620(305032)

# Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EM258254980US in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on January 13, 2009  
Date

James E. Moore

**Signature**

**Lynn Marcus**

Typed or printed name of person signing Certificate

Registration Number, if applicable

(617) 239-0100  
Telephone Number

**Note:** Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Transmittal Form (1 page)  
Request for Reconsideration (2 pages)  
Copy of Submission of Sequence Listing as filed 10/23/01 (with copy of  
originally filed Computer Readable Form) (17 pages + CRF)



Docket No.: 55620(305032)  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Hitoshi Endou et al.

Application No.: 09/787,194

Confirmation No.: N/A

Filed: March 15, 2001

Art Unit: N/A

For: CEREBRAL ORGANIC ANION  
TRANSPORTER AND ITS GENE

Examiner: Not Yet Assigned

**REQUEST FOR RECONSIDERATION OF PETITION DECISION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Madam:

In response to the Decision mailed by the United States Patent and Trademark Office (the "Office") on December 19, 2008 (the "Decision"), Applicant respectfully requests that the Petition for Revival of an Application originally filed on September 27, 2007, in the above-identified patent application be reconsidered in view of the submission of the within documents and materials.

In the Decision, the Office acknowledges that Applicant has provided the required petition fee and also satisfied the requirement that the entire delay in filing the required reply was unintentional. However, the Office indicates that a grantable petition must include a copy of the sequence listing materials (including the CRF) required by the Notification of Missing Requirements mailed by the Office on April 30, 2001.

Accordingly, Applicant respectfully submits a full copy of the Sequence Listing Submission with all of its enclosures (including a copy of the originally filed Computer Readable Form), which was mailed to the Office originally on October 23, 2001.

It is respectfully submitted that with today's submission, Applicant has satisfied all requirements for a grantable petition under 37 CFR 1.137(b).

In view of the foregoing, it is requested that the present application be reinstated and that it proceed to examination without delay.

It is believed that no additional fees are required. Please charge all fees, or credit any overpayments, to our deposit account No. 04-1105, under our attorney docket number 55620(71526).

Dated: January 13, 2009

Customer No. 21874

Respectfully submitted,

By Christine C. O'Day

Christine C. O'Day

Registration No.: 38,256

EDWARDS ANGELL PALMER & DODGE  
LLP

P.O. Box 55874

Boston, Massachusetts 02205

(617) 517-5558

Attorneys/Agents For Applicant



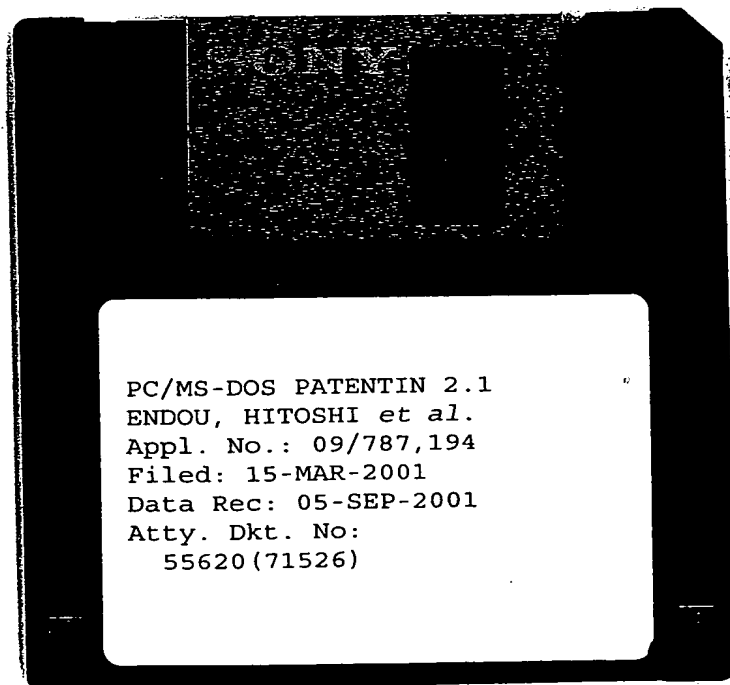
## EDWARDS & ANGELL, LLP

DIKE, BRONSTEIN, ROBERTS & CUSHMAN  
*Intellectual Property Practice Group*  
P.O. Box 9169  
BOSTON, MA 02209

Mailing Date:	October 23, 2001	Attorney/Sec:	PFC/jah
Client:	71526	Docket No.:	55620
Inventors:	Hitoshi ENDOU, et al.	Patent No.:	
Serial No.:	09/787,194	Grant Date:	
Filing Date:	March 15, 2001		

The dating stamp of the Patent and Trademark Office hereon will be taken as the date of filing of  
Submission of Sequence Listing Computer Readable Copy: (6) pgs;  
Submission of Diskette (1);  
Copy of Office Letter date mailed 30 April 2001 (1) page;  
Statement that Sequence Listing and hardcopy are the same (2)p.  
Petition for One Month Extension of Time;  
Check for Petition EOT Fee \$110.00;  
Certificate of mailing.

Due Date:





Practitioner's Docket No. 55620 (71526) PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: ENDOU, HITOSHI et al.  
Application No.: 09/787,194 Group No.: Not Yet Assigned  
Filed: March 15, 2001 Examiner: Not Yet Assigned  
For: BRAIN TYPE ORGANIC ANION TRANSPORTER AND  
ITS GENE ENCODED

Box Sequence  
Assistant Commissioner for Patents  
Washington, D.C. 20231

SUBMISSION OF "SEQUENCE LISTING," COMPUTER READABLE COPY,  
AND/OR AMENDMENT PERTAINING THERETO  
FOR BIOTECHNOLOGY INVENTION CONTAINING NUCLEOTIDE  
AND/OR AMINO ACID SEQUENCE

(check and complete this item, if applicable)

1. ☒ This replies to the Office Letter DATED 30 April 2001.

NOTE: If these papers are filed before the office letter issues, adequate identification of the original papers should be made, e.g., in addition to the name of the inventor and title of invention, the filing date based on the "Express Mail" procedure, the serial number from the return post card or the attorney's docket number added.

☒ A copy of the Office Letter is enclosed.

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being:

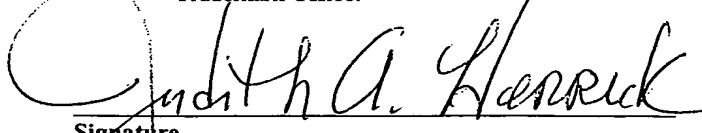
MAILING

☒ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Date October 23, 2001

FACSIMILE

☐ transmitted by facsimile to the Patent and Trademark Office.

  
Signature  
Judith A. Herrick  
(type or print name of person certifying)

## IDENTIFICATION OF PERSON MAKING STATEMENT

2. I, Peter F. Corless

*(type or print name of person signing below)*

state the following:

## ITEMS BEING SUBMITTED

3. Submitted herewith is/are

*(check each item as applicable)*

- A. ☒ "Sequence Listing(s)" for the nucleotide and/or amino acid sequence(s) in this application. Each "Sequence Listing" is assigned a separate identifier as required in 37 C.F.R. § 1.821(c) and 37 C.F.R. §§ 1.822 and 1.823.
- B. ☐ An amendment to the description and/or claims, wherein reference is made to the sequence by use of the assigned identifier, as required in 37 C.F.R. § 1.821(d).
- C. ☒ A copy of each "Sequence Listing" submitted for this application in computer readable form, in accordance with the requirements of 37 C.F.R. §§ 1.821(e) and 1.824.
- D. ☐ Please transfer to this application, in accordance with 37 C.F.R. § 1.821(e), the computer readable copy(ies) from applicant's other application identified as follows:

In re application of:

Serial No.:

Filed:

For:

Group No.:

Examiner:

The Computer readable form(s) of applicant's other application corresponds to the "Sequence Identifier(s)" of the application as follows:

Computer Readable Form

(other application)

"Sequence Identifier"

(this application)

**NOTE:** *"If the computer readable form of a new application is to be identical with the computer readable form of another application of the applicant on file in the Office, reference may be made to the other application and computer readable form in lieu of filing a duplicate computer readable form in the new application. The new application shall*

*be accompanied by a letter making such reference to the other application and computer readable form, both of which shall be completely identified." 37 C.F.R. 1.821(e).*

- E. ☒ A statement that the content of each "Sequence Listing" submitted and each computer readable copy are the same, as required in 37 C.F.R. § 1.821(g).

☐ Because the statement is not made by a person registered to practice before the Office, the Statement is verified as required in 37 C.F.R. § 1.821(b).

- F. ☒ Because this submission is made in fulfilling the requirement under 37 C.F.R. § 1.821(g), a statement that the submission includes no new matter.

☐ Because the statement is not made by a person registered to practice before the Office, the statement is verified, as required in 37 C.F.R. § 1.821(g).

**STATEMENT THAT "SEQUENCE LISTING"  
AND COMPUTER READABLE COPY ARE THE SAME  
AND/OR THAT PAPERS SUBMITTED INCLUDES NO NEW MATTER**

4. I hereby state:

*(complete applicable item A and/or B)*

- A. ☒ Each computer readable form submitted in this application, including those forms requested to be transferred from applicant's other application, is the same as the "Sequence Listing" to which it is indicated to relate.
- B. ☒ All papers accompanying this submission, or for which a request for transfer from applicants' other application, introduce no new matter.

**STATUS**

5. Applicant is

☐ a small entity. A statement:  
☐ is attached.  
☐ was already filed.  
☒ other than a small entity.

**EXTENSION OF TERM**

- 6.

**NOTE:** *"Extension of Time in Patent Cases (Supplement Amendments) If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period."*



*If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of Dec. 10, 1985 (1061 O.G. 34-35).*

**NOTE:** See 37 C.F.R. 1.645 for extensions of time in interference proceedings and 37 C.F.R. 1.550(c) for extensions of time in reexamination proceedings.

7. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(complete (a) or (b) as applicable)

(a) ☒ Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for the total number of months checked below:

	<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input checked="" type="checkbox"/>	one month	\$110.00	\$ 55.00
<input type="checkbox"/>	two months	\$390.00	\$ 195.00
<input type="checkbox"/>	three months	\$890.00	\$ 445.00
<input type="checkbox"/>	four months	\$1,390.00	\$ 695.00

Fee \$110.00

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

☐ An extension for \_\_\_\_\_ months has already been secured, and the fee paid therefor of \$ \_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$

**OR**

(b) ☐ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

#### **FEE PAYMENT**

8. ☒ Attached is a check in the sum of \$ 110.00.

☐ Charge Account No. \_\_\_\_\_ the sum of \$ \_\_\_\_\_.

A duplicate of this transmittal is attached.

### FEE DEFICIENCY

9.

**NOTE:** *If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.*

10. [X] If any additional extension and/or fee is required, charge Account No. 04-1105.

### SIGNATURE(s)

Reg. No. 33,860

Peter F. Corless

(type or print name of person signing statement)



Signature

Oct. 25, 2001

Date

Dike, Bronstein, Roberts & Cushman  
Intellectual Property Practice Group  
EDWARDS & ANGELL, LLP

P.O. Box 9169

P.O. Address of Signatory

Boston, MA 02209

(If applicable)

Tel. No.: (617) 439-4444

- ☐ Inventor
- ☐ Assignee of complete interest
- ☐ Person authorized to sign on behalf of assignee
- ☒ Practitioner of record
- ☐ Filed under Rule 34(a)
- ☐ Registration No.
- ☐ Other

(specify identity of person signing)

(complete the following, if applicable)

\_\_\_\_\_  
(type name of assignee)

\_\_\_\_\_  
Address of assignee

\_\_\_\_\_  
Title of person authorized to sign on behalf of assignee

A "STATEMENT UNDER 37 C.F.R. 3.73(b)" is attached.

Assignment recorded in PTO on \_\_\_\_\_

Reel \_\_\_\_\_ Frame \_\_\_\_\_



\_\_\_\_\_  
SIGNATURE OF PRACTITIONER

Reg. No. 33,860

\_\_\_\_\_  
PETER F. CORLESS

\_\_\_\_\_  
(type or print name of practitioner)

Tel. No.: (617) 439-4444

\_\_\_\_\_  
P.O. Address

Customer No.: 21874

BOS2\_180829.1



JAN 13 2009 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket No: 55620(71526)

In re patent application of

ENDOU, HITOSHI et al.

Serial No. 09/787,194

Filed: March 15, 2001

For: BRAIN TYPE ORGANIC ANION TRANSPORTER AND ITS GENE ENCODED

STATEMENT TO SUPPORT FILING AND SUBMISSION IN  
ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box SEQUENCE

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the undersigned hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. § 1.821(g), does not include new matter;

2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821(c) and (e), respectively, are the same; and


3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

Serial No. 09/787,194

States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

Sept. 5, 2001  
Date

  
\_\_\_\_\_  
James A. Coburn

HARBOR CONSULTING  
Intellectual Property Services  
1500A Lafayette Road  
Suite 262  
Portsmouth, N.H.  
800-318-3021



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box PCT  
United States Patent and Trademark Office  
Washington, D.C. 20231  
www.uspto.gov

U.S. APPLICATION NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/787194	ENDOU	H 55620
INTERNATIONAL APPLICATION NO.		
PCT/JP99/05120		
I.A. FILING DATE		PRIORITY DATE
20 SEP 99		18 SEP 98
DATE MAILED: 30 APR 2001		

EDWARDS & ANGELL  
DIKE BRONSTEIN ROBERT & CUSHMAN  
130 WATER STREET  
BOSTON, MA 02109

**NOTIFICATION TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS  
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE  
DISCLOSURES**

Applicant has submitted papers under 35 U.S.C. 371 to enter the national stage in the United States of America. The items indicated below, however, are missing. The period within which to correct the deficiency noted below and avoid abandonment is set forth in the accompanying Notification.

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- ☒ The application fails to comply with the requirements of 37 CFR 1.821-1.825.
- ☐ This application does not contain, a "Sequence Listing" as a separate part of the disclosure on paper copy or compact disc, as required by 37 CFR 1.821(c).
- ☐ A copy of the "Sequence Listing" in computer readable format has not been submitted as required by 37 CFR 1.821(e).
- ☐ A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
- ☐ The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- ☐ The paper copy or compact disc of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).
- ☐ Other: \_\_\_\_\_

**APPLICANT MUST PROVIDE:**

- ☒ An initial or substitute computer readable form (CRF) of the "Sequence Listing."
- ☐ An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- ☒ A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).

**FOR QUESTIONS REGARDING COMPLIANCE WITH THESE REQUIREMENTS, PLEASE  
CALL:**

(703) 308-4216, for Rules interpretation,  
(703) 308-4212, for CRF submission help,  
(703) 287-0200, for PatentIn software help.

Pat Booker, Paralegal  
Telephone: 703-305-3738



**EDWARDS & ANGELL, LLP**  
COUNSELLORS AT LAW  
since 1894  
101 Federal Street  
Boston, MA 02110



52-36/112

No.

705741

CHECK DATE  
October 23, 2001

CHECK NO.  
705741

\*\*\*ONE HUNDRED TEN AND 00/100 DOLLARS\*\*\*

CHECK AMOUNT  
\$\*\*\*110.00

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OF

Commissioner of Patents & Trademarks

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SECURITY  
PAPER

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**EDWARDS & ANGELL, LLP**  
COUNSELLORS AT LAW

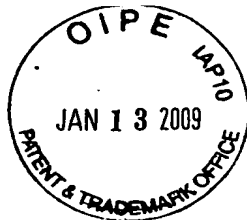
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NUMBER

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COMMISSION Commissioner of Patents & Trademarks

Invoice No.	Invoice Date	Description	Invoice Amount	Discount	Payment Amount
45858.56038/10	10/23/2001	for PTO code 115	\$110.00	\$0.00	\$110.00



## SEQUENCE LISTING

<110> ENDOU, HITOSHI  
SEKINE, TAKASHI  
KUSUHARA, HIROYUKI

<120> BRAIN TYPE ORGANIC ANION TRANSPORTER AND ITS GENE  
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<130> 55620(71526)

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Asn His Asn Leu Leu Gln Ile Phe Thr Ala Ala Thr Pro Val His His
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Cys Arg Pro Pro His Asn Ala Ser Thr Gly Pro Trp Val Leu Pro Met
      50          55          60

Gly Pro Asn Gly Lys Pro Glu Arg Cys Leu Arg Phe Val His Pro Pro
      65          70          75          80

Asn Ala Ser Leu Pro Asn Asp Thr Gln Arg Ala Met Glu Pro Cys Leu
      85          90          95

Asp Gly Trp Val Tyr Asn Ser Thr Lys Asp Ser Ile Val Thr Glu Trp
      100          105          110

Asp Leu Val Cys Asn Ser Asn Lys Leu Lys Glu Met Ala Gln Ser Ile
      115          120          125

Phe Met Ala Gly Ile Leu Ile Gly Gly Leu Val Leu Gly Asp Leu Ser
      130          135          140

Asp Arg Phe Gly Arg Arg Pro Ile Leu Thr Cys Ser Tyr Leu Leu Leu
      145          150          155          160

Ala Ala Ser Gly Ser Gly Ala Ala Phe Ser Pro Thr Phe Pro Ile Tyr
      165          170          175

Met Val Phe Arg Phe Leu Cys Gly Phe Gly Ile Ser Gly Ile Thr Leu
      180          185          190

Ser Thr Val Ile Leu Asn Val Glu Trp Val Pro Thr Arg Met Arg Ala
      195          200          205

Ile Met Ser Thr Ala Leu Gly Tyr Cys Tyr Thr Phe Gly Gln Phe Ile
      210          215          220

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Leu	Pro	Gly	Leu	Ala	Tyr	Ala	Ile	Pro	Gln	Trp	Arg	Trp	Leu	Gln	Leu	225	230	235	240
Thr	Val	Ser	Ile	Pro	Phe	Phe	Val	Phe	Phe	Leu	Ser	Ser	Trp	Trp	Thr	245	250	255	
Pro	Glu	Ser	Ile	Arg	Trp	Leu	Val	Leu	Ser	Gly	Lys	Ser	Ser	Glu	Ala	260	265	270	
Leu	Lys	Ile	Leu	Arg	Arg	Val	Ala	Val	Phe	Asn	Gly	Lys	Lys	Glu	Glu	275	280	285	
Gly	Glu	Arg	Leu	Ser	Leu	Glu	Glu	Leu	Lys	Leu	Asn	Leu	Gln	Lys	Glu	290	295	300	
Ile	Ser	Leu	Ala	Lys	Ala	Lys	Tyr	Thr	Ala	Ser	Asp	Leu	Phe	Arg	Ile	305	310	315	320
Pro	Met	Leu	Arg	Arg	Met	Thr	Phe	Cys	Leu	Ser	Leu	Ala	Trp	Phe	Ala	325	330	335	
Thr	Gly	Phe	Ala	Tyr	Tyr	Ser	Leu	Ala	Met	Gly	Val	Glu	Glu	Phe	Gly	340	345	350	
Val	Asn	Leu	Tyr	Ile	Leu	Gln	Ile	Ile	Phe	Gly	Gly	Val	His	Val	Pro	355	360	365	
Ala	Lys	Phe	Ile	Thr	Ile	Leu	Ser	Leu	Ser	Tyr	Leu	Gly	Arg	His	Thr	370	375	380	
Thr	Gln	Ala	Ala	Ala	Leu	Leu	Leu	Ala	Gly	Gly	Ala	Ile	Leu	Ala	Leu	385	390	395	400
Thr	Phe	Val	Pro	Leu	Asp	Leu	Gln	Thr	Val	Arg	Thr	Val	Leu	Ala	Val	405	410	415	
Phe	Gly	Lys	Gly	Cys	Leu	Ser	Ser	Ser	Phe	Ser	Cys	Leu	Phe	Leu	Tyr	420	425	430	
Thr	Ser	Glu	Leu	Tyr	Pro	Thr	Val	Ile	Arg	Gln	Thr	Gly	Met	Gly	Val	435	440	445	
Ser	Asn	Leu	Trp	Thr	Arg	Val	Gly	Ser	Met	Val	Ser	Pro	Leu	Val	Lys	450	455	460	
Ile	Thr	Gly	Glu	Val	Gln	Pro	Phe	Ile	Pro	Asn	Ile	Ile	Tyr	Gly	Ile	465	470	475	480
Thr	Ala	Leu	Leu	Gly	Gly	Ser	Ala	Ala	Leu	Phe	Leu	Pro	Glu	Thr	Leu	485	490	495	
Asn	Gln	Pro	Leu	Pro	Glu	Thr	Ile	Glu	Asp	Leu	Glu	Asn	Trp	Ser	Leu	500	505	510	
Arg	Ala	Lys	Lys	Pro	Lys	Gln	Glu	Pro	Glu	Val	Glu	Lys	Ala	Ser	Gln	515	520	525	

Arg Ile Pro Leu Gln Pro His Gly Pro Gly Leu Gly Ser Ser  
 530 535 540

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 <212> DNA  
 <213> Rattus sp.

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 gccatgacct tctccgagat tctggaccgt gtcggaagca tgggcccctt ccagtacctg 180  
 catgtgacct tgctggccct cccagtcctc ggaatagcca accacaactt gctacagatc 240  
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 <212> PRT  
 <213> Rattus sp.

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 Met Thr Phe Ser Glu Ile Leu Asp Arg Val Gly Ser Met Gly Pro Phe  
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			20					25					30				
Asn	His	Asn	Leu	Leu	Gln	Ile	Phe	Thr	Ala	Thr	Thr	Pro	Val	His	His		
		35					40					45					
Cys	Arg	Pro	Pro	Pro	Asn	Ala	Ser	Ile	Gly	Pro	Trp	Val	Leu	Pro	Leu		
	50					55					60						
Asp	Pro	Asn	Gly	Lys	Pro	Glu	Lys	Cys	Leu	Arg	Phe	Val	His	Leu	Pro		
	65				70					75					80		
Asn	Ala	Ser	Leu	Pro	Asn	Asp	Thr	Gln	Arg	Ala	Thr	Glu	Pro	Cys	Leu		
				85					90					95			
Asp	Gly	Trp	Ile	Tyr	Asn	Ser	Thr	Arg	Asp	Thr	Ile	Val	Ile	Glu	Trp		
			100					105					110				
Asp	Leu	Val	Cys	Ser	Ser	Asn	Lys	Leu	Lys	Glu	Met	Ala	Gln	Ser	Ile		
		115					120					125					
Phe	Met	Ala	Gly	Ile	Leu	Val	Gly	Gly	Pro	Val	Ile	Gly	Glu	Leu	Ser		
	130					135						140					
Asp	Arg	Phe	Gly	Arg	Lys	Pro	Ile	Leu	Thr	Trp	Ser	Tyr	Leu	Met	Leu		
	145				150					155					160		
Ala	Ala	Ser	Gly	Ser	Gly	Ala	Ala	Phe	Ser	Pro	Ser	Leu	Pro	Val	Tyr		
				165					170						175		
Met	Ile	Phe	Arg	Phe	Leu	Cys	Gly	Cys	Ser	Ile	Ser	Gly	Ile	Ser	Leu		
			180					185					190				
Ser	Thr	Val	Ile	Leu	Asn	Val	Glu	Trp	Val	Pro	Thr	Ser	Met	Arg	Ala		
		195					200					205					
Ile	Ser	Ser	Thr	Ser	Ile	Gly	Tyr	Cys	Tyr	Thr	Ile	Gly	Gln	Phe	Ile		
	210					215						220					
Leu	Ser	Gly	Leu	Ala	Tyr	Ala	Ile	Pro	Gln	Trp	Arg	Trp	Leu	Gln	Leu		
	225				230					235					240		
Thr	Ser	Ser	Ala	Pro	Phe	Phe	Ile	Phe	Ser	Leu	Leu	Ser	Trp	Trp	Val		
				245					250					255			
Pro	Glu	Ser	Ile	Arg	Trp	Leu	Val	Leu	Ser	Gly	Lys	Tyr	Ser	Lys	Ala		
			260					265					270				
Leu	Lys	Thr	Leu	Gln	Arg	Val	Ala	Thr	Phe	Asn	Gly	Lys	Lys	Glu	Glu		
		275					280					285					
Gly	Lys	Lys	Leu	Thr	Ile	Glu	Glu	Leu	Lys	Phe	Asn	Leu	Gln	Lys	Asp		
	290					295					300						
Ile	Thr	Ser	Ala	Lys	Val	Lys	Tyr	Gly	Leu	Ser	Asp	Leu	Phe	Arg	Val		
	305				310					315					320		

Ser Ile Leu Arg Arg Val Thr Phe Cys Leu Ser Leu Ala Trp Phe Ser  
 325 330 335  
 Thr Gly Phe Ala Tyr Tyr Ser Leu Ala Met Gly Val Glu Glu Phe Gly  
 340 345 350  
 Val Asn Ile Tyr Ile Leu Gln Ile Ile Phe Gly Gly Val Asp Ile Pro  
 355 360 365  
 Ala Lys Phe Ile Thr Ile Leu Ser Leu Ser Tyr Leu Gly Arg Arg Ile  
 370 375 380  
 Thr Gln Ser Phe Leu Leu Leu Leu Ala Gly Gly Ala Ile Leu Ala Leu  
 385 390 395 400  
 Ile Phe Val Pro Ser Glu Met Gln Leu Leu Arg Thr Ala Leu Ala Val  
 405 410 415  
 Phe Gly Lys Gly Cys Leu Ser Gly Ser Phe Ser Cys Leu Phe Leu Tyr  
 420 425 430  
 Thr Ser Glu Leu Tyr Pro Thr Val Leu Arg Gln Thr Gly Met Gly Ile  
 435 440 445  
 Ser Asn Val Trp Ala Arg Val Gly Ser Met Ile Ala Pro Leu Val Lys  
 450 455 460  
 Ile Thr Gly Glu Leu Gln Pro Phe Ile Pro Asn Val Ile Phe Gly Thr  
 465 470 475 480  
 Thr Ala Leu Leu Gly Gly Ser Ala Ala Phe Phe Leu Leu Glu Thr Leu  
 485 490 495  
 Asn Arg Pro Leu Pro Glu Thr Ile Glu Asp Ile Gln Asn Trp His Lys  
 500 505 510  
 Gln Val Gln Lys Thr Lys Gln Glu Ser Glu Ala Glu Lys Ala Ser Gln  
 515 520 525  
 Ile Ile Pro Leu Lys Thr Gly Gly  
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